WHY AREN'T WE SELLING MORE APPLE JUICE?

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THE EDITOR suggested the above question as a subject, and we have chosen it for a title. The question raised is a good one.

Let us look at the facts first. The accompanying chart shows the production of the five major fruit juices for the past nine years. Pineapple at eight million and mixed citrus at nine million cases in 1947 were omitted to avoid confusion in the chart. Fruit juices got their start in 1929 with grapefruit, followed in 1931 with tomato, in 1935 with blended citrus and pineapple, and in 1939 with orange and apple. The chart shows steep curves for tomato and citrus, but an almost flat curve for apple. For the past several years apple juice has accounted for about 1.5 per cent of the total juices produced. And this in spite of the fact that the apple is our best known fruit. Why aren't we drinking more apple juice?

This Laboratory has been giving the matter serious attention for several years. One of the first things we did was to set up and train a taste panel for evaluating the quality of the juice. We also made chemical analyses, of course, but we firmly feel that the ultimate and critical factor is whether a juice tastes good. We graded on a flavor scale of 1 to 10, 10 being the perfect juice and 1 and 2 being not only the worst but also those having a definitely objectionable flavor. We obtained directly from the producers samples of practically all commercial apple juices packed in 1940, 1941, 1946, and 1947. There were from 32 to 40 each year.

The table shows the percentage of juices that fell within the various flavor ratings. The conspicuous facts in the table are that during the last two years there were no excellent juices; that about 14 per cent were good; that half were only fair; that a third were poor; and that a number were objectionable.

Then, since we felt that we might have been too critical, we called a conference of juice manufacturers and research workers, and showed them what we meant by an 8 grade, a 4 grade, and a 2 grade. They agreed with our ratings.

We submit that here is the answer to our title question. More apple juice is not sold and drunk because too much of it is of poor quality—it doesn't appeal.

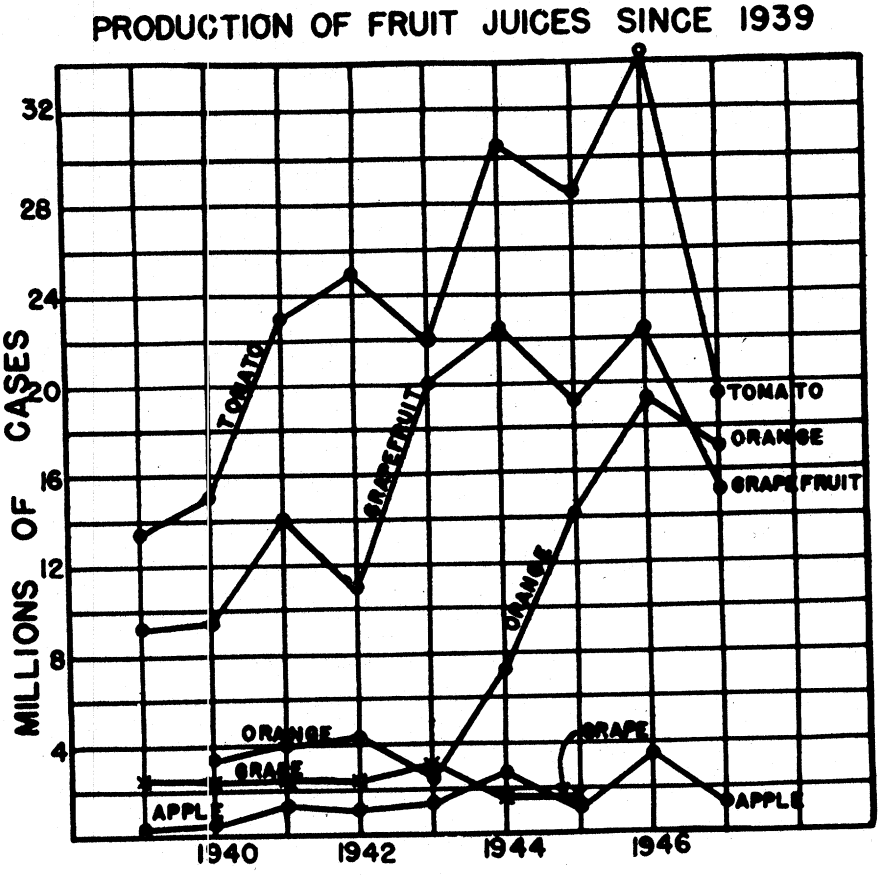
COMPARISON OF 1940, 1941, 1946, and 1947 COMMERCIAL APPLE JUICES

	1940	1941	1946	1947
	%	%	%	%
Typical apple flavor 10-9, excellent	2			
8-7, good	28	15	14	12
6-5, fair	53	51	36	50
4-3, poor	17	32	36	34
2-1, objectionable		2	14	4

What is the trouble? Many factors, of course, enter into the final nature and quality of juice. We place at the top of the list the quality of the fruit. The apples must be ripe, sound, and fully flavored. They may be small or misshapen or have blemishes, but they must be free of positive faults such as greenness or decay. If a poor-flavored juice comes out of the press, it is really immaterial about the clarification, the pasteurizing temperature, the use of ascorbic acid, or the choice of container. To be sure, these factors can ruin a good juice, but they can't by themselves make a good one out of poor apples. Other juice factors which bear watching are the total solids, which should be above 13 per cent and certainly above 12.5 per cent, and the acidity, which should be between 0.4 and 0.6 per cent. Blends of aromatic and of tart varieties should always be used.

We firmly believe that if all apple juice put on the market were of flavor grades from 6 to 9 (probably no one will ever make a 10) many times the present volume could be sold. Advertising, labels, selling methods undoubtedly come into the picture, but this article deals only with technical matters.

Incidentally, it will be interesting to watch developments on the blending of apple juice with that of other fruits — cranberry at the Massachusetts Agricultural Experiment Station, strawberries and raspberries at the Geneva (N.Y.) station, rhubarb, peaches, and berries at Virginia. These blends may not resemble any of the constituents clearly, but may be something entirely new. If successful, they will be new beverages to tickle our palates and new outlets for our various fruits.



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